of the poor on a sustainable basis, it is essential to raise the rate of economic growth in the LDCs.[3] At the same time, as the rate of growth of internal demand is likely to be increasingly important in the future, a basic-needs approach should contribute to faster industrial development, especially given the present state of the world economy (Singh, 1979:587–88, 600–01).

Global estimates of the costs of meeting basic needs require so many assumptions that they are likely to be closer to fantasy than to reality. The specifics of such estimates cannot be gone into here, but in general it may be noted that development aid would have to be increased substantially, particularly for the poorer countries, if a global basic-needs program is to be implemented by the end of the century (the ILO target). (See Sewell et al., 1980:105; Streeten et al., 1981: 175–76.) Since 1976, the bilateral donors and multilateral agencies have been increasingly directing their attention to support for basic-needs activities. Aid agencies are not well placed, however, to focus exclusively on support for basic needs, especially if their aid is tied to imports and is not available for local expenditure. Consequently, it is more helpful to support a country's development efforts as a whole as long as that country has a commitment to a basic-needs program, and to make assistance as flexible and long-term as possible (Cassen, 1978a: 12). There is no question, however, that increasing attention to support of basic needs has been salutary, indicating as it does that the donors have recognized that aid has failed to reach those who need it most.

Two other development issues deserve at least brief attention, namely, the relationships of basic needs to the New International Economic Order (NIEO) and to a comprehensive development strategy. It is important to emphasize that the principal source of proposals for a basic-needs approach has been the DCs and the international agencies rather than the LDCs themselves, although a number of LDCs were concerned with problems of poverty reduction long before the ILO manifesto in 1976 (Wolfe, 1979:10). The DCs have espoused the concept of basic needs in part because they want to ensure that the aid they provide does not represent a simple transfer from the DCs to the higher-income groups in the LDCs. Whatever may be the factual basis for this belief, it means that NIEO proposals that do not assign in-

3 For a good recent discussion of the issue of basic needs and economic growth, see Streeten et al. (1981:96–108).

portance to meeting the needs of the poor would not evoke much support from the DCs. But there is a widespread perception, especially in the LDCs, that the basic-needs approach is either a "second best" development strategy, excluding poor countries from the benefits of industrialization, or a ploy to block the legitimate efforts of Third World countries to modify the structure of international economic relations so that it becomes more favorable to their needs and interests (Garcia-Bouza, 1980:45).

It is true that most of the official documents advocating basic needs have placed principal emphasis on major internal changes, and that little attention has been paid to the need for the equivalent changes in international economic relations. Positive responses by the industrial nations to the search by the LDCs for an NIEO could be helpful in strengthening national economies, but would hardly be a sufficient condition for helping the poor. If international reforms are to help the poor, they must be complemented by changes in the LDCs designed to channel the benefits of production and distribution to those who need them most. Perhaps the principal significance of the basic-needs approach is that it places the central focus on people rather than on countries as the primary units in the development process, certainly a welcome innovation. Just as advocates of an NIEO have tended to neglect the necessity of internal reforms, so those who espouse basic needs have accorded relatively less emphasis to international reforms. Consequently, the seeming competition between basic needs and an NIEO has emerged as the important issue, rather than their complementarity (Garcia-Bouza, 1980:44). Clearly, the representatives of the DCs and the LDCs will have to move on both fronts if the needs of poor people and of the national economies in the Third World are to be met.

In the ILO report and subsequent writings, the basic-needs approach appears to constitute the central component of a comprehensive development strategy that would not only accord absolute priority to meeting the basic needs of the poor but also provide the grand design for national development as a whole. These formulations, however, give little attention to industrial development, as has been noted, and have little to say about the need for fundamental structural change. For these and other reasons, some development specialists deny that the basic-needs approach can lay claim to constituting a comprehensive development strategy (Dell, 1978:33; Minhas, 1979:43–44). They

concede that the basic-needs advocates have made a substantial contribution to the development dialogue by emphasizing the importance of equitable distribution of the benefits of development, but have claimed too much in according it the status of a comprehensive development strategy. These issues may be of critical concern to participants in the ongoing development debate. But whether the basic-needs approach should constitute *the* comprehensive development strategy or whether it should be viewed as a precondition for the implementation of a program to help the poor as part of a broader development strategy is not nearly as important as whether overall national development strategies can be designed to help the poor and the society as a whole to achieve their development objectives, whatever the individual developing countries decide these objectives should be.

LINKS BETWEEN POVERTY-FOCUSED PERSPECTIVES AND POPULATION CHANGE

Income distribution and redistribution now occupy a prominent position in the development dialogue, but references in the development literature to the links between distribution problems and population change are sparse indeed. The work on "redistribution with growth" mentions population only in passing and most of the advocates of a basic-needs approach have little to say about the population implications. (This omission has been shared by Third World statesmen. Neither the "Declaration of a New International Economic Order" nor its associated "Program of Action," adopted at the Sixth Special Session of the United Nations in April 1974, contains any explicit reference to population as a factor in international economic relations or in national development.) The ILO report (1977:59–60) does make a single reference to population, acknowledging that the rate of population growth is obviously the main determinant of the number of people whose basic needs must be met, and that although in the long-run development will itself lead to reduced population growth, intensified and more appropriate family planning programs are required to reinforce this process.

Actually, the principal dimensions in the basic-needs approach and the factors considered to constitute the important determinants of fertility largely coincide. Moreover, as will be seen, there are several reasons for believing that demographic factors have influenced recent trends in income distribution. Both increase in average incomes and

redistribution of income, which are among the principal goals of the basic-needs approach, are intricately related in complex ways to population change. The growth of GNP per capita, as has been noted, used to be regarded as the main indicator of success in development. But experience has shown that substantial growth of average incomes by itself may have little meliorative effect on income distribution and fertility reduction. Venezuela and Mexico, for example, are countries that generated high rates of economic growth and at the same time maintained badly skewed income distribution and high fertility (Rich, 1973:72–73). So there is increasing interest in looking at the relationship between fertility and those factors associated not so much with average income growth but with the distribution of the gains of development (Cassen, 1978b:49).

The original theory of the demographic transition constituted an elaborate description of the various "stages" (analogous to the modernization model) in the development of the industrialized countries at which mortality and fertility behaved in particular ways, with low mortality and fertility prevailing at the point where economic and social development has been "achieved." And it was believed that this process would hold for the LDCs as well. Subsequent research showed, however, that this pattern did not hold for a number of Western countries, let alone the LDCs, so that the "demographic transition" is now just a term to describe the passage countries traverse from high to low mortality and fertility (Cassen, 1976:786–88; Coale, 1975; Teitelbaum, 1975). In fact, marked fertility decline already has occurred in a number of countries where development changes have been in the direction of basic-needs objectives and the populations are mainly poor and rural. Sri Lanka, Kerala (in India), and the People's Republic of China are the examples most often cited. Freedman (1979:65–66) has observed that they have at least the following changes in common: (1) better health and greater life expectancy, which means fewer births are needed for the survival of any desired number; (2) higher education for both sexes, which increases the costs and decreases the benefits while children are in school; (3) welfare programs, providing at least minimum subsistence for the poor majority, at least in food, which may decrease dependence on children; and (4) communication and transportation facilities capable of providing the information (not least about family planning), services, and goods that have produced the other changes. Although these cases may not be generalizable,

Freedman (Ibid.) notes that the same pattern of fertility decline associated more with distribution of the gains of development than with growth of average incomes seems to be occurring in northern Thailand and probably in Java and Bali as well.

A recent analysis of cross-country data that became available during the mid-1970s focuses on some relationships between basic-needs policies and population growth (Morawetz, 1978). The analysis takes as its departure point the argument that policies specifically designed to improve the health and nutrition levels of the poorest people are likely to cause infant and general mortality rates to decline. But, the argument goes, a reduction in mortality rates is likely to lead to an increase in the population growth rate, which, in turn, may partially or fully offset the welfare gains from implementating the initial policies. This argument ignores, however, a second important effect of basic-needs policies on population growth—their effect on fertility. The findings of the analysis are as follows: First, basic-needs policies—to the extent that they lower infant mortality rates, increase education, cause the income distribution to be more equal, and raise per capita income—may indeed bring about an eventual reduction in fertility as well as mortality rates. Second, there does seem to be some slight evidence that reduced infant mortality and increased education interact in reducing fertility, but the data do not permit any precise estimate of the importance of such interaction. And third, there do seem to be lags in the effects of decreased infant mortality and increased education on the fertility rate, but the data shed little light on the determinants of the length of these lags.

So, although basic-needs policies seem to carry with them the promise of eventual fertility decline, the critical question is how soon that decline occurs. Apparently it is not true that implementing basic-needs policies necessarily sustains rapid population growth, but it is also apparently not true that governments that follow a basic-needs policy are already doing all that is necessary to control population growth. Governments still need to take all measures in their power to reduce fertility rates as rapidly as possible to avoid population sizes that could have serious consequences for the development prospects of their countries.

It should be noted that, although poverty and rapid population growth are definitely related, neither is the necessary determinant nor consequence of the other (Birdsall, 1980: 1). Various aspects of this

relationship will be identified in the following section on the determinants and consequences of population change. Here it may suffice to say that within many developing countries, particularly those with low levels of economic and natural resources, the degree and scale of future poverty could be reduced with lower rates of population growth (Ibid.). Fertility rates are declining in many LDCs, but given the built-in momentum generated by the large proportion of children and adolescents in LDC populations, population growth will continue well into the next century regardless of what is done now to reduce fertility. If the gains of development are to be enhanced for the coming generations, however, everything possible must be done to head off subsequent increases of even greater magnitude. Consider the following World Bank projections made in 1979 (International Bank, 1980: 142–43): By the year 2000, world population will grow from the present 4.1 billion to 6 billion (and probably to at least 9 billion by 2050), and the population of the developing countries will grow from 3 to 5 billion. World population growth rates are projected to decrease from the present 1.71 to around 1.36 in the year 2000, while the rate for the LDCs should decrease from 2.12 to 1.62. Nevertheless, the absolute annual increases in population size are projected to grow from about 70 million in 1980 to 82 million in the year 2000 for the world as a whole and from 64 to 76 million in the LDCs.

With ever larger numbers entering the labor force in the LDCs, problems of unemployment and underemployment will become greatly exacerbated beyond those that already exist unless poverty-focused development policies can generate programs for creating employment and increasing income for the poor that will give them much greater access to the gains of development and convert population constraints into economic opportunities. Some developing countries have already begun to cope with the current problems of poverty and the longer-term need for slowing population growth if prospective gains are not to be imperiled, while others have yet to move on both fronts.

INTERRELATIONS BETWEEN POPULATION AND DEVELOPMENT

Consensus in the field of population and development is not easily come by (as in many other fields of human endeavor), but most persons concerned with the field would probably agree to the following general propositions: Enhanced development, where this includes

economic growth and the more equitable distribution of its gains, is likely to be accompanied by declining fertility; reduction of fertility is not an end in itself but rather a means to facilitate these goals of development since rapid population growth slows down development; and, in a variety of circumstances, integration of population efforts with those of other development programs may enhance the effectiveness of both. This is a short list, and as a guide to policy intervention it has no value at all because of its generality. But it does provide a starting point.

A voluminous literature on the determinants and consequences of fertility is already available, employing a "macro" approach in which countries are the unit of analysis or a "micro" approach focused on households and individuals.[4] In a few pages all that can be done here is to highlight some of the contributions and limitations of this literature, and perforcedly to direct the discussion primarily to fertility. Although mortality and migration merit similar attention, they must be largely ignored here. From the studies of determinants, a consensus has emerged on at least a few factors that tend to reduce fertility, namely, female education, decreases in infant mortality, and greater equality in income distribution to the extent that it increases the well-being of the poor. But consensus stops here. In the interpretation of these findings, there is no agreement on which, if any, of these factors is necessary for a fertility decline, or on the relative importance of one or another factor. There are various explanations of why the results of fertility research are subject to this and other uncertainties, which can be advanced at different levels.

To begin with, much of this research was oriented to demographic transition theory, so that the task of research was viewed largely as one of specification and statistical estimation of the relationship between socioeconomic variables associated with modernization and economic development, on the one hand, and fertility, on the other. Like the modernization model that earlier dominated development thinking, this orientation essentially obscured empirical reality. There are in fact a number of pathways from high to low fertility; fertility can decline under a variety of cultural and economic conditions, and it is misleading to assume that convergence with the process followed by

4 For reviews of this literature, see Cassen (1976) and Birdsall (1977). Jones (1978) has done a comprehensive review for Southeast and East Asia, and Urzua (1978) has done the same for Latin America.

some industrialized countries must precede such decline (Freedman, 1978:609). Since demographic transition theory is not very applicable to the developing world, there is little conceptual apparatus left with which to interpret the kinds of statistical relationships that have been found (Population Council, 1981:314).

Second, attempts to attribute fertility decline to one determinant or another are unlikely to be successful (Ibid.:318–19). The causal connection between a particular determinant and fertility is complex and certainly indirect, since it must operate through intermediate behavioral and biological factors—what have been termed the proximate fertility determinants of marriage pattern, contraceptive use and effectiveness, prevalence of induced abortion, and duration of lactational immunity from conception (Bongaarts, 1978, 1982). Moreover, the difficulties of attributing causation to one factor are compounded by the likelihood that several relevant factors may be changing at the same time (Cassen, 1978b:29–30). These factors are linked together in intricate ways, for some are simultaneously determined and many are independent in one relationship and dependent in another. And they often move together over time so that their independent effects are difficult to isolate. What one is dealing with, then, is a set of mutually interacting causes, all of which are part of a broad process of social and economic change. Given these considerations, it is clear that the difficulties of a piecemeal approach to the determinants of fertility are formidable indeed.

Third, and related to the preceding points, is the fact that the relationships between fertility and its determinants and consequences vary among regions, countries, and different socioeconomic, occupational, and cultural groups within countries. Rapid population growth is a global problem, but it does not follow that this problem can have any general solution (Hawthorn, 1978:14). The conditions, correlates, causes, and consequences of fertility rates in different countries vary sufficiently so that attempts to reduce fertility must take into account the particular institutional, cultural, and material environments in which reproductive behavior takes place, as well as the type of development policy being pursued (McNicoll, 1978, 1980). Much of the research to date has taken these environments as givens and has focused on individual and household characteristics largely to the exclusion of these environments. This is not to say that comparative or cross-cultural research is of no value. On the contrary, comparative

treatment may very well strengthen particular explanations by placing them in a larger framework of what works and what does not, but only if the research documents the empirical reality of the setting in which reproduction occurs. Such work could be sufficiently specific to serve as the basis for policy decisions in that particular setting and at the same time permit more general conclusions.

An appreciation of the extent to which mutual interactions characterize the relationships between population and development has led to an increasing emphasis on the importance of identifying the consequences as well as the determinants of population change. There is growing awareness, not only by those in population but by those with other development interests as well, that it is just as important to build a knowledge base about how changes in population size, composition, and distribution affect the goals of development strategy as to know about the effects of development strategy on population factors (Saunders, 1978:4). In many LDCs, the consequences of rapid population growth are now creating problems that are of more immediate urgency than that of reducing the high fertility that generated the problems. The consequences of population change are evident in many sectors, e.g., in employment, housing, rural development, urban growth, and education. In the short-run, knowing the consequences of population change may be more important than knowing the causes since, as indicated earlier, the built-in momentum to population growth can be slowed only by policies that will have an effect in the long-run although policy now must be oriented to adjusting to the consequences of that growth (Freedman, 1978:623–24).

A wide range of factors has been identified as determinants and consequences of fertility, reflecting the complexity of the relationship between population and the social, economic, and psychological factors that are also part of the broad process of societal change. A United Nations task force has recently begun constructing a framework for the conceptualization, measurement, analysis, and formal representation, through modeling, of interrelations between population and development (United Nations, 1981a, 1981b). The framework comprises a 61 by 61 matrix for the mapping of direct linkages among 15 main development objectives, ten population variables, and 36 other variables reflecting the broader economic, social, cultural, and political aspects of the development process. Determinants and consequences are considered here one by one, although this violates

the reality that they do not operate independently and can be understood and interpreted only in a larger context. To proceed otherwise, however, would be to enter into the morass of everything being related to everything else. In any case, this review must be cursory and selective.

DETERMINANTS OF FERTILITY

Infant mortality

Typically, declines of fertility have been preceded by declining mortality. In many LDCs, however, mortality has declined markedly but fertility has declined very little or, as in some African countries, has even risen. But instances of major fertility decline in the absence of mortality reduction are so rare in the LDCs that many believe the reduction of infant and child mortality may be virtually a precondition for substantial reductions in fertility. Mortality decline appears to be leveling off in many LDCs at what are still unacceptable levels, and this phenomenon makes the current groundswell for primary health care for the poor all the more important. It seems reasonable to believe that improved health care will eventually encourage some decline in fertility.

There remain many unanswered questions, however. Little is known about the determinants of the length of the lag between mortality and fertility decline and the resulting effect on population growth rates (Preston, 1975, 1978; Schultz, 1976). Although there is more evidence for than against the proposition that decreases in infant and child mortality will be followed by fertility decline, such factors as family income, education, and economic growth affect both fertility and infant mortality and probably distort the results of attempts to measure the direct relationship between the two. In East and Southeast Asia, for example, perhaps the one ubiquitous element in all the regions where fertility has declined rapidly is that the decline has been preceded by a substantial decline in infant and child mortality. But then infant mortality has also declined in most regions where fertility has not declined. It appears that a decline in infant mortality may be a necessary precondition for sustained fertility decline but not a sufficient one (Jones, 1978:32).

Education

Perhaps the most widely accepted generalization is that of the inverse relationship between education and fertility. Nevertheless, the evidence seems to indicate that education may cause fertility to increase or decrease (Cochrane, 1979:9–10). The decrease is greater for the education of women than of men and in urban than rural areas. But education is more likely to increase fertility in countries with the lowest level of female literacy. It is possible that education initially increases the ability to have live births, probably through better nutrition, improved health, and departure from traditional patterns of lactation and postpartum abstinence. Initially, this effect seems to be strong enough to counteract the effect of education on the postponement of marriage. In societies with higher average levels of female literacy, education lowers the demand for children by altering their perceived costs and benefits. It is likely that education should be viewed as more often contributing its influence less directly than has been portrayed in the literature, since it seems to operate and mediate through and with other factors, as is the case with the other determinants of fertility (Graff, 1979:134).

Value and costs of children

The proposition that fertility tends to respond to shifts in the balance of costs and benefits involved in having children has met with fairly wide agreement (Miro and Potter, 1980:96). Some of the elements that enter into this calculus for individuals and families are the opportunity costs attached to time spent by parents and others in childrearing; direct costs such as those arising from expenditures on food, clothing, and education; and the economic and psychosocial benefits. Much of the work has been done by economists employing the "household economics" approach, but there has also been a series of psychosocial studies of the value of children, which have yielded useful insights about the role that children play in their parents' lives (Bulatao, 1979a, 1979b).

These psychosocial studies focus on the transition in the value of children, i.e., on changes in the values and disvalues that parents attach to children. In some sense children become less valuable, but they also become valued for different reasons and the burdens they impose

on their parents are altered not just quantitatively but also qualitatively (Bulatao, 1979b:1). The principal findings of this work include the documentation of a direct relationship between a high level of perceived economic utility of children and high fertility, and as this perceived utility begins to vanish, the productive value of children for parents declines. Although it is argued that a central reason for the decline from high to low fertility rates is this transition in the value of children, the question of which development factors cause specific changes in values and disvalues of children involves a complex process that has not been addressed by these studies (Ibid.:53).

A recent analysis of the economic value of children in rural areas of Bangladesh focuses specifically on their value as insurance against economic risk (Cain and Lieberman, 1982). The study depicts the harshness and diversity of the risk environment there and the absence of effective forms of insurance. It is argued that a direct attack on the risk-insurance-fertility nexus is not only a necessary but also a sufficient condition for a substantial fertility decline in rural Bangladesh (Ibid.:27). The principal recommendation offered is that the Bangladesh government reorganize and reconstitute its employment-generating initiatives as a guaranteed employment scheme offering secure income-earning opportunities to all in need.

Status and employment of women

The best answer that can be given to the question of whether the fertility of working women is lower than that of nonworking women is maybe (Kupinsky, 1977:369). There is no consistent pattern in the LDCs (or for that matter in the DCs) among all subgroups of working women. Such factors as the status of women in a given society; the normative orientation toward women working, particularly in nonfamilial, nonagricultural occupations; the nature and type of occupations women engage in; their identification or commitment to their worker role; the societal norms regarding childbearing and family size; and the attitude toward and availability of inexpensive mother substitutes and daycare centers to mitigate role conflicts—all play a role as part of the general economic, social, and psychological setting affecting the fertility of working and nonworking women.

A review of studies on female work status and fertility in Latin America showed no consistent inverse relationship between female labor force participation and fertility (Davidson, 1977:351–52). The

inverse relationship was fairly predominant in large cities but virtually absent in small towns. The important factors related to female labor force participation were education, the number and ages of children, husband's income, the type of family (nuclear versus extended), urban-rural status of the community, and the stage of economic development of the country.

It has been observed (Ahooja-Patel, 1977:83) that in the great development dialogue the principal protagonists have successfully omitted any reference to the place of women in the development process. The human and economic costs of this neglect are particularly high in many areas of the developing world, especially in rural areas. If the basic-needs approach is to have any genuine effectiveness for rural women, it will have to open up redistribution of land and other assets for women as well as men beyond the level of the domestic unit and provide equitable economic and occupational opportunities for women (Palmer, 1977). Improving women's opportunities for education, ownership of assets, and participation in rural development on equal terms with men (as well as access to the full range of jobs in the urban sector), like reducing infant mortality, has its own justification; but adding the fertility-reduction potential to such projects increases the benefits of the projects relative to their given costs.

Family planning programs

There has been an ongoing debate on the question of whether family planning programs reduce fertility more efficiently and effectively than general development programs. Given the difficulty of controlling for the effect of changes apart from family planning, such as increases in income, in occupational structure, and in education, the question cannot be answered definitively. Some studies, within-country and comparative, indicate that family planning programs have influenced fertility declines in addition to the effects of development, but it is probable that such programs are effective only where there has been at least some developmental change. Socioeconomic development has facilitated contraceptive practice. Once the motivation to practice family planning is present, availability of means through large-scale programs can accelerate fertility decline. The effectiveness of family planning programs thus is closely associated with the level of development reached by a country. They are probably most effective in countries that have reached a medium or intermediate level of

development. At lower levels, motivation and demand are not strong enough among the highest fertility groups for programs to reach them, whereas at more advanced levels of development fertility is likely to decline in any case (Urzua, 1978:83; Freedman, 1978:616–20).

Income distribution

At the most general level, all the evidence seems to point toward the proposition that fertility will decline as economic and social development bring improved well-being to the poor majorities in the developing countries, which decades of economic growth have failed to do. But the idea that income itself can have a direct relationship to fertility has been difficult to test (Simon, 1976; Ridker, 1979:xiv). Even if there is a causal relationship, could it operate with sufficient strength and speed to justify a policy of income redistribution? Clearly, there are other justifications as well for implementing such a policy, which have been already noted.

A recent, well-documented analysis of the relationship between income distribution and fertility places the argument on somewhat more secure ground (Repetto, 1979). The study documents the contribution of economic inequality to rapid population growth through its effect on birth rates. It shows that a more unequal distribution of income within a community implies a higher aggregate birth rate and a faster rate of population growth than elsewhere, and that for a community at any level of development, as measured by average income per capita or some similar index, the overall birth rate will be lower the more equally distributed that total income is. Societies in which economic gains are limited to a small elite, while the vast majority lead marginal lives of insecurity and deprivation, display high fertility. Any fertility declines under these conditions are usually concentrated within the small fraction of the population that has received most of the economic benefits so that they do little to reduce the rate of population growth in the society as a whole. At low levels of income, increases in living standards result in rapid fertility declines, whereas at higher levels there may be little change in fertility and possibly some increase. So it is impossible to refer generally to the effect of economic improvements on birth rates. The point is that the economic status of those who experience the improvement is a key determinant of that effect. The effect of income growth on birth rates depends on who gets the income; that is, it is the distribution of income that matters.

The principal proposition to which Repetto's work is oriented, namely, that reductions in income inequality induce declines in fertility, has been rejected by one writer on the basis that the evidence presented is not convincing (Boulier, 1982). Even though the question of how and to what extent fertility responds to income redistribution programs still remains to be answered, however, the analysis just described does establish the importance of the problem and lays the groundwork for further research on this issue.

CONSEQUENCES OF RAPID POPULATION GROWTH

Health

High fertility rates have an immediate effect on costs of health services, since obstetric and pediatric care constitute a large part of total demand for health services (Birdsall, 1977:69). Nevertheless, rapid population growth is by no means the only cause of inadequate health care. In most LDCs, the physician/hospital/high-technology approach to health care has limited such care largely to urban elites. Given the powerful commitment of the medical profession to this approach, health services do not reach or are inaccessible to a large proportion of the population in need, perhaps as much as 80 to 85 percent. Services are sparse in rural areas and urban slums largely as a result of a gross maldistribution of facilities and personnel. Health care systems in most LDCs (and DCs as well) are dominated by physicians and fail to make optimal use of other health personnel. And a poor balance exists between curative and preventive care, since curative, hospital-based, high-technology medicine in urban areas is usually dominant.

In view of these conditions, reforms in health care delivery might yield as much improved health as would an immediate reduction in demand due to lower population growth rates. Instead of services for only a limited number, a shift to a primary health care approach could provide coverage for those large proportions of the population in need (Simmons, 1982). Such an approach would include the following components: major participation by the community to be served, with some of the needed resources mobilized by the community; orientation to specific locations in the sense of designing the program to fit the actual circumstances of different communities; involvement of paramedical personnel of appropriate kinds; inclusion of other elements besides medical care, such as nutrition, water supply, health

education, immunization, and specific therapies; emphasis on maternal and child health, including family planning; and linkages to a broader array of development efforts in education and agriculture and other income-producing activities. Both reduction of fertility and adoption of a primary health care approach (which in itself would help to reduce fertility) are indicated if the benefits of development are to be reaped by all.

Education

Population growth creates greater strains in education than in almost any other development sector (Cassen, 1976:812–13). The age distribution in LDCs generates very high population proportions of school age. Expenditures on education have risen sharply in most LDCs. In most developing countries the contribution of population growth to the increase in recurrent costs of primary education over a 20-year period has been estimated to be on the order of 50 to 70 percent, and higher if capital costs are added (Jones, 1975:81). Current high fertility virtually insures more children entering the schools in the future. The single most important factor in increasing educational expenditures is the absolute increase in the number of students; but associated factors, such as an increase in the number of teachers and their rising wages, as well as extra facilities, also elevate costs. In view of the scarcity of available resources, it is likely that rapid expansion of an educational system will be at the expense of upgrading quality or even result in lower standards. Costs can be contained to some extent by increasing student-teacher ratios and decreasing the number of years students are enrolled, but these moves dilute whatever quality of education school systems are trying to maintain (Birdsall, 1977:69). The inhibiting effects of age structure on future educational development would be substantially mitigated if a rapid decline in fertility could be accomplished.

Food

Like most of the other relationships being considered, that between population growth and food supply is complex, and long-range projections of the supply of and demand for food are beset by such uncertainties as income changes, changes in agricultural technology, the variations in agricultural conditions around the world, and the political plausibility of redistribution. Viewed globally, food supplies can

probably match the rate of growth of population for a long time to come, even with current technology (Cassen, 1976:809). This global picture owes much to the capacity of the DCs, taken as a whole, to generate surpluses for export. But in the absence of marked improvements in food production in the LDCs, that capacity may not be much of a help. Increasing population will result in more demand for food, and the LDCs will be forced to import larger amounts. Estimates of the probable amounts of these imports vary but range up to more than 100 million tons per year by 1990, a cost of about $20 billion a year (Murdoch, 1980:132–33). Large imports of food cause a severe drain on the limited foreign exchange that many of the poorest LDCs can earn and constitute a serious impediment to their economic growth. The balance between food and population is also more precarious than the global picture suggests because food production around the world fluctuates from year to year. Shortfalls in production in some years can cause greatly increased hardship, particularly when bad weather causes simultaneous reductions in various parts of the world.

As indicated earlier, food consumption by large sections of the population in all but the richest LDCs is well below what is needed for a minimally satisfactory diet. The underlying cause of hunger and malnutrition is that those who need food do not have the money to buy it or to produce it, not because supplies are inadequate in some absolute sense. An annual increase of 3.5 to 4 percent in food production in the LDCs is within physical and technical constraints and is also economically possible. Such a rate of increase would be large enough to meet the projected food needs of the LDCs and would facilitate rapid economic development. Even at such high growth rates, however, a redistribution of income would be needed to reduce malnutrition significantly as well as to facilitate reduction of fertility (Stedman, 1978–79:409–10).

Labor absorption

Rapid population growth is no more directly responsible for unemployment in the LDCs than it is for hunger and malnutrition. Unemployment and underemployment can be attributed to inadequate access by the poor to public services, to education, and to productive assets, which in turn depends on the inequities at which poverty-focused development approaches are aimed (Cassen, 1976:811). Even if basic-needs policies can be implemented, rapid population growth

still makes the task of creating productive employment that much harder. But such policies could moderate the negative effect of rapid population growth to the extent that they would promote the development of appropriate labor-intensive technology for production, expand irrigation to permit more intensive use of land, and reorient industrialization to serve the goals of a national development strategy that will serve the needs of all sectors of the population. In the absence of such changes, rapid population growth will continue to play a part in confining a large proportion of the rural and urban labor force to low-productivity, low-wage jobs (Birdsall, 1977:69–70).

Income distribution

As indicated earlier, although income distribution and redistribution are now a prominent issue in the development dialogue, the influence of fertility change on distribution problems has received little attention. But the relationship may be a critical one in coping with the problems of economic development (Cassen, 1976:811–12). There are at least two kinds of effects of rapid population growth on income distribution—those that affect overall economic growth and thus differentially affect different income groups, and those that result from differential fertility and mortality among income groups and thus directly affect their income-earning prospects and the numbers who depend on those incomes. The first effect evidently has a negative impact on income distribution. As noted, rapid population growth exacerbates the problem of providing adequate educational and health services, which adversely affects the poor more than the rich, who have access to private educational and health services. It can also be argued that the effect of higher fertility among the rural poor may force them to subdivide their land (if they have any) and make them more vulnerable to losing it altogether.

High fertility increases the inequality of income distribution among families (Birdsall, 1977:76–77). Less educated and lower-income parents are more likely than others to have large families; and to the extent that there are economic and social restrictions on upward mobility, the relatively more rapid increase in numbers of the poor can adversely affect efforts at income redistribution. If the norm of large family size persists in future generations, the poverty associated with such large families is likely to be perpetuated and to exacerbate the difficulties of implementing poverty-focused development policies.

Given the paucity of both theory and empirical research in this area, however, convincing generalizations are still not within reach. The effects of demographic factors on income distribution, and vice versa, are mixed and inadequately understood. Although it does appear that higher fertility is associated with greater economic inequality, it is not clear whether the direction of causation is from fertility to inequality (Rodgers, 1978:315). The reverse causation may be just as likely, as indicated by the analysis reported in the discussion of income distribution as a determinant of fertility.

CONCLUSIONS

This overview of poverty-focused development perspectives, of the requirements for their implementation, and of the interrelations between population and development has yielded no easy solutions to the problems of choosing between alternative policy options. It would seem that the social scientists giveth with one hand and taketh away with the other. The effects of population change on a country's development efforts and how such efforts are likely to affect population change are still beset with many unresolved questions, the answers to which will differ from country to country. Nevertheless, a substantial knowledge base has been generated that points to recurrent significant linkages between population and development factors that can provide useful guidelines for the work that needs to be done to clarify these relationships at national and regional levels, and those guidelines can be operationally useful in national development planning and policy making.

At the general level, there are just too many factors that might make a difference one way or the other (Miro and Potter, 1980:100). Policy-relevant research has to be country-specific (McNicoll and Nag, 1982:10; Urzua, 1978:129; Jones, 1978:85–86). Even when the same problem is analyzed in more than one country, it cannot be assumed that social, economic, and political factors will have exactly the same effect in each country. Quite different levels and kinds of development are associated with fertility reductions in, say, East Asia, Southeast Asia, and Latin America (Kirk, 1971:145–46).

Going beyond population policy to the issues of development policy, one finds similar uncertainties. The LDCs cannot be viewed as a homogeneous group. They are diverse in their past and present economic performance, social structure and cultural traditions, political arrange-

ments, infrastructure, availability of natural resources, and thus in their prospects for future development. The factors that are most significant in determining the course of development vary from country to country. Answers to policy questions will require identifying the particular mix of these factors that have to be manipulated if goals of national development are to be achieved, whatever a country decides those goals should be (Jones, 1978:25–26).

For the most part, decisions about what research on population problems is undertaken rest largely with individual social scientists pursuing their own disciplinary interests, and relatively little attention is given to the needs of development planners and policy-makers. In undertaking country-specific research and to insure that it has policy relevance, there is a need to bring to the planners and policy-makers an understanding of what is already known that is of policy relevance, to engage them with researchers in a common effort to identify the key questions that are researchable and need to be answered, and to provide policy-makers with continuing consultation, based on the best available knowledge, of what options may be open to them, together with the anticipated effects, as they engage in the decision-making process (Simmons and Saunders, 1975:16–17).

One way to facilitate the systematic consideration of population factors in national economic and social development planning and programming has been to set up a unit in the planning apparatus of government staffed by researchers who can work continually on analyses of current planning and policy issues and give planners and policy-makers relatively quick and specific answers to their questions. Such researchers should also be able to provide policy-makers with a range of alternative policy options and estimates of probable outcomes of the alternative policies, both for population and for development objectives (Ibid.:17–18; Saunders, 1978:17). Several Asian countries, including the Republic of Korea, Sri Lanka, and Thailand, already have established population units in their national development planning agencies; and others, including Bangladesh, Indonesia, Nepal, and the Philippines, are in the process of creating such units (Population Council, 1980:1). As would be expected, each country has defined the location and role of the unit in its own way, but all of the units have the common problem of limited staff capacity, so that staff development is a critical need. It is to be hoped that these institutional arrangements will foster a mutual learning process—to help planners

see the relevance of population to their problems and researchers to understand better the constraints under which planners and policy-makers operate. Researchers will have to learn how the world looks to policy-makers and to take into account their perceptions and values, as well as to be critical of planners' assumptions if those assumptions are at odds with demographic realities (Simmons and Saunders, 1975: 17).

Development policies that seek to reduce poverty and population policies aimed at reducing fertility go hand in hand. It is extremely unlikely that social science research will eventually identify any fundamental solutions to the problem of reducing fertility that would not involve major social and economic structural change as well (Miro and Potter, 1980:192). Recent analyses of what has happened to absolute poverty in the LDCs over the last 20 years indicate that there are absolutely more poor people; whether the proportion is larger is less certain (Streeten, 1978:242).[5] A wide variety of explanations has been offered as to why this is so. Development policies obviously play a part; but the social and political structure, cultural traditions, the extent of human capital formation (especially education), the distribution of assets (particularly land), and foreign trade all influence the relationship between economic growth and poverty reduction, although the relative importance of each of these elements is uncertain (Ibid.). Many of these factors are also related to fertility reduction; and if better health and the reduction of infant mortality, more productive employment, and higher status of women are added, the determinants of fertility and of poverty are fairly well subsumed.

Attainment of these objectives of development may indeed facilitate reduction of fertility, but they are not in themselves a sufficient condition for such a reduction in the short run (Coale, 1978–79:41). As has been indicated, the uncertainties that becloud the nature of the relationships between fertility and its determinants and the unresolved question of the length of lags between changes in these determinants and the occurrence of fertility decline do not evoke much confidence in the slogan that development by itself is the best contraceptive. The

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5 According to the World Bank report cited earlier (International Bank, 1980:35), the proportion of people in absolute poverty in LDCs as a group is estimated to have fallen during the past two decades (although probably not in sub-Saharan Africa in the 1970s). But because population has grown, the number of people in absolute poverty has increased.

objectives of poverty-focused development strategies must be assiduously pursued in any case, of course, since they are desirable in their own right. Their attainment will all be made easier by the reduction of fertility, however, so there is an imperative need to move ahead in evaluating and improving policy measures that can be undertaken for the specific purpose of reducing fertility in the short run. These measures include family planning programs and their interactions with other aspects of social change; the incorporation of family planning programs into other development programs, such as health, rural development, and education, where this may enhance the effectiveness of family planning; the use of incentives; and other interventions that may have more immediate fertility-reducing effects. (The interest in "restructuring development" to maximize fertility reduction has not, however, yielded any useful policy measures as yet.)

Final observations require noting that a number of relevant important areas and issues have not been considered in this discussion at all. Their inclusion in this paper would make its length prohibitive, but at least some of them may be listed.

Internal migration, its determinants and consequences, and their links to national development strategy constitute a problem area perhaps equal in importance to that of fertility. It is a reasonable proposition that the goals of development strategy in a country ultimately determine the spatial distribution of the population and changes in that distribution. If the principal goals include making the best use of natural and human resources where they are to be found and reducing the disparities in access to the benefits of development both between social classes and the rural and urban sectors, then it will be necessary to implement policy measures aimed at eliminating the urban bias and rural neglect that characterize so many developing countries. As indicated earlier, this should not be construed as downgrading the need for industrialization in countries that have the capacity for it. On the contrary, employment-oriented rural development is required to facilitate industrial development.

Mobilizing popular participation and community-level action programs is a critical area for attention if poverty-focused development strategies are going to work (International Labour Office, 1977:66, 69; Cassen, 1978a:5–6; Ghai and Alfthan, 1977:20 ff.). Not only is it necessary to reallocate existing patterns of expenditure for public services in favor of the poor, but also giving them proper access to the

necessary resources to help them meet their own needs more fully will lower the costs of poverty-reduction programs. Moreover, popular participation is both an efficient means of achieving basic-needs targets and a worthy goal in itself for the fulfillment of human potential. The government must provide services, but it should balance such welfare by giving people the opportunity to learn to help themselves and each other. Popular participation and community-level action constitute a complex area for development efforts; even so, it is at that level that development and population change must be based. Much more needs to be known about how the commitment of local people can be mobilized and their participation secured and strengthened, and how local programs can be incorporated into national development efforts and linked effectively to larger networks of resources and economic relations.

Finally, a few words are needed about the imposing political and other constraints on the implementation of poverty-focused development strategies. Much has been written in the development literature about the need for equitable distribution of the benefits of development, but little about how the DCs and LDCs alike might generate the political will and determination to initiate and implement the changes that are required to obtain that equitable distribution. Nor has the increase in expressions of concern in the literature for the poorest groups in the poorest countries been matched by a parallel increase in the number of LDC programs effectively aimed at that poverty (Garcia-Bouza, 1980:47).

At the international level, foreign aid, under proper conditions, can assist development, but the DCs have also hindered development, through adverse trading arrangements, the transfer of inappropriate technology, the negative fallout from the operations of multinational corporations, and, on occasion, even direct opposition to desirable political change. Until DC governments do more to eliminate these hindrances, their expressions of concern about the persistence of world poverty will have little credibility.

Within the LDCs, it is evident that restructuring political and economic power relationships is a prerequisite for effective implementation of a poverty-focused development strategy. The provision of welfare services and transfers of income and resources are a necessary but not sufficient condition because they will not definitively eliminate the underlying causes of poverty (Griffin and Khan, 1978:303).

The real solution lies in structural change, in changing the distribution of productive wealth and thus the distribution of economic power, and in increasing the participation of the poor in decision-making and thus enabling them to exercise political power. Some governments, dominated by entrenched elites, will relinquish nothing to the poor until they are forced to by revolution, whereas others are already engaged in attacking the causes of poverty. In many, probably most, developing countries the political decision to allow the poor to share power with those groups that are already powerful seems at least plausible, through reformist tactics and initiation of a pragmatic process of tradeoffs (Bell, 1974:71–72).[6] In some countries, it is likely that vigorous pursuit of such strategies will not be easily forthcoming, but the pressure of events may finally compel recognition that sharing power may indeed be the only way to retain it.

6 Incremental approaches of this kind are advocated here only because of the need to design selective and flexible strategies that have the best chance of coping with adverse political reactions likely to be elicited by the introduction of policies aimed at redistributing economic and political power to include the poor. But this should not be construed as minimizing the need for a "package" approach aimed at genuine change in the condition of the poor through a concerted effort on a variety of fronts simultaneously if the objectives of poverty-focused development perspectives are to be realized.

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